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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
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| 10/043,216 | 01/14/2002 | Takashi Watanabe | 8011-1001 | 6202 |

466 7590 03/18/2003

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EXAMINER

KOVAL, MELISSA J

| | |
|----------|--------------|
| ART UNIT | PAPER NUMBER |
|----------|--------------|

2851

DATE MAILED: 03/18/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/043,216

Applicant(s)

WATANABE, TAKASHI

Examiner

Melissa J Koval

Art Unit

2851

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-8 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-8 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 14 January 2002 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on ____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. ____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 4.
- 4) ☐ Interview Summary (PTO-413) Paper No(s). ____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

DETAILED ACTION

Priority

Receipt is acknowledged of papers submitted under 35 U.S.C. 119(a)-(d), which papers have been placed of record in the file.

Drawings

The drawings are objected to because Figures 1 and 2 do not show clear reference to "feed screw 72" as described on page 5 of the specification. Applicant should carefully review all of the figures. A proposed drawing correction or corrected drawings are required in reply to the Office action to avoid abandonment of the application. The objection to the drawings will not be held in abeyance.

Specification

The disclosure is objected to because of the following informalities: On page 5, lines 28 through 32, of the specification "feed screw 72" is referred with reference to Figures 1, 2 and 3, but reference character "72" is not shown in Figures 1 or 2. Applicant should carefully review the specification.

Appropriate correction is required.

Claim Rejections - 35 USC § 112

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 1-8 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

With respect to claim 1, the phrase "both end parts of the feed screw" requires a further point of reference to understand how the feed screw is oriented with respect to the remainder of the elements comprising the device. With respect to claims 1, 5 and 7, the elements comprising the feed screw device are listed in each of the claims, without a clear description of the structural relationships between each of the elements to one another, such that it cannot be clearly understood where the elements are with respect to one another within the overall device.

Claims 2, 4, 6 and 8 are rejected as they depend from an already rejected claim.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1-8 are rejected under 35 U.S.C. 103(a) as being unpatentable over Park ('169).

Refer to Figures 3 and 4 of Park, for example.

Claim 1 sets forth: " A feed screw device, comprising: a feed screw which is driven by driving power of a motor; shaft bushes which are provided movably in an axial

direction of the feed screw to rotatably support both end parts of the feed screw; and cushioning members through which the shaft bushes are supported by stationary parts.”

Park and applicant are essentially claiming the same invention as set forth in applicant's claim 1, i.e. a feed screw driven by a motor, wherein the feed screw is provided with a variety of guiding means. Refer to feed screw 30 and motor 80 as disclosed by Park. Thread recesses 38' in conjunction with guide plates 40 and 44 provide an equivalent function to the claimed shaft bushes. The shaft bushes are axially movable as are the guide plates. With respect to the claimed cushioning means, refer to lead and rear parts 55 and 56, respectively, of the feed screw. These parts are pitched to affect the moving velocity of the guide plates. The pitched parts of the feed screw in conjunction with the guide rods 36' and the guide plates function equivalently to the claimed “cushioning members through which the shaft bushes are supported by stationary parts” as far as the terms and limitations of the claims can be understood.

With respect to claims 2, 4, 6 and 8, the presence of one or more LCD devices in a projector is well known in the art and described to be conventional by Park.

Claim 3 sets forth: “The feed screw device according to claim 1, further comprising: a detecting device which detects movement of the feed screw in the axial direction; and a control device which stops the motor when of the feed screw in the axial direction is detected by the detecting device.” Refer to column 5, lines 56 through 59. Also refer to guide protrusions 42 of Park.

Claims 5 and 7 are rejected for the same reasons already applied to already rejected claims 1 and 3.

Conclusion

The art made of record and not relied upon is considered pertinent to applicant's disclosure.

Lee U.S. Patent 5,618,094 teaches a projection system.

Uchida U.S. Patent 6,409,343 B1 teaches an ophthalmic apparatus.

Tanaka U.S. Patent Application Publication US 2002/0047408 A1 teaches a motor actuation device for a camera.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Melissa J Koval whose telephone number is (703) 308-4801. The examiner can normally be reached on Monday through Friday.


If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Russell Adams can be reached on Monday through Thursday at (703) 308-2847. The fax phone numbers for the organization where this application or proceeding is assigned are (703) 305-3431 for regular communications and (703) 308-7382 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-0956.

Application/Control Number: 10/043,216
Art Unit: 2851

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MJK
March 12, 2003


RUSSELL ADAMS
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2800